

### Abstract

**A thermally induced sound wave generating device comprising a thermally conductive substrate, a head insulation layer formed on one surface of the substrate, and a heating element thin film formed on the heat insulation layer and in the form of an electrically driven metal film, and wherein when the heat conductivity of the thermally conductive substrate is set as  $\alpha_s$ , and its heat capacity is set as  $C_s$ , and the thermal conductivity of the heat insulation layer is set as  $\alpha_1$  and its heat capacity is set as  $C_1$ , relation of  $1/100 \geq \alpha_1 C_1 / \alpha_s C_s$  and  $\alpha_s C_s \geq 100 \times 10^6$  is realized. This is a new technical means capable of greatly improving the function of a pressure generating device based on thermal induction.**